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U.S. DEPARTMENT OF AGRICULTURE

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Picture Story No.112

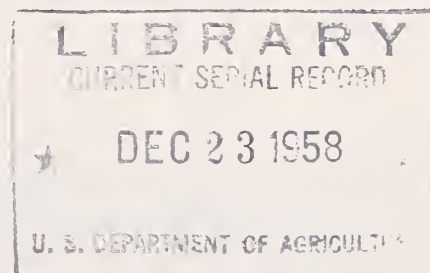
November 1958



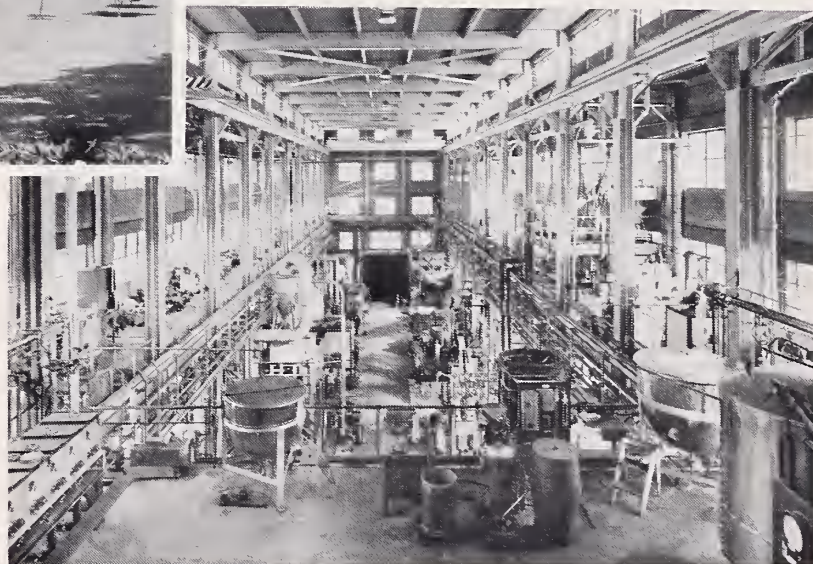
EASTERN UTILIZATION RESEARCH AND DEVELOPMENT DIVISION Agricultural Research Service



BN-7031-X-Main building of the Eastern Utilization Research and Development Division located in Wyndmoor, Pa.



BN-7017-X-Pilot-plant wing of building where processes developed in the laboratory are tried out on a larger scale.



The headquarters of the Eastern Utilization Research and Development Division are located in Wyndmoor, Pa., just beyond the northwestern limits of Philadelphia. The U-shaped building is similar in size and design to the main buildings of the three other Utilization Research and Development Divisions--the Northern in Peoria, Ill.; the Southern in New Orleans, La.; and the Western in Albany, Calif.

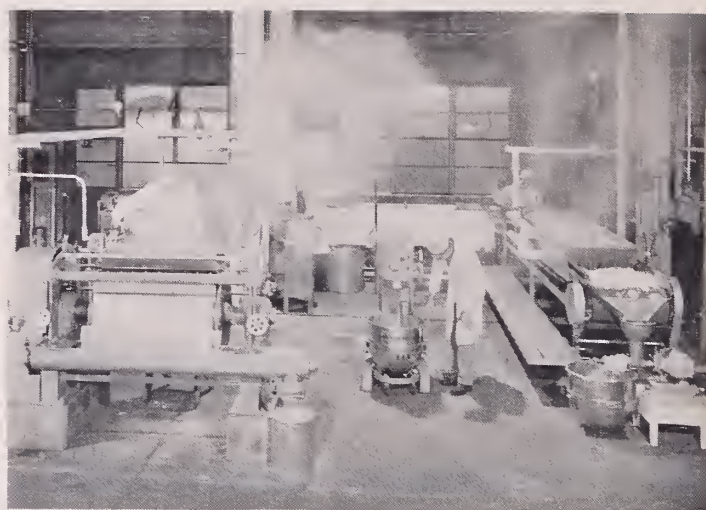
Emphasis of the research in all of these laboratories is on the utilization of agricultural products. The commodities studied at the East-

ern Division are Eastern deciduous fruits; Eastern vegetables; meat; dairy products; animal fats; hides, tanning materials, and leather; honey; maple; tobacco; wool byproducts; plant precursors of cortisone; biologically active plant compounds; and allergens of agricultural products.

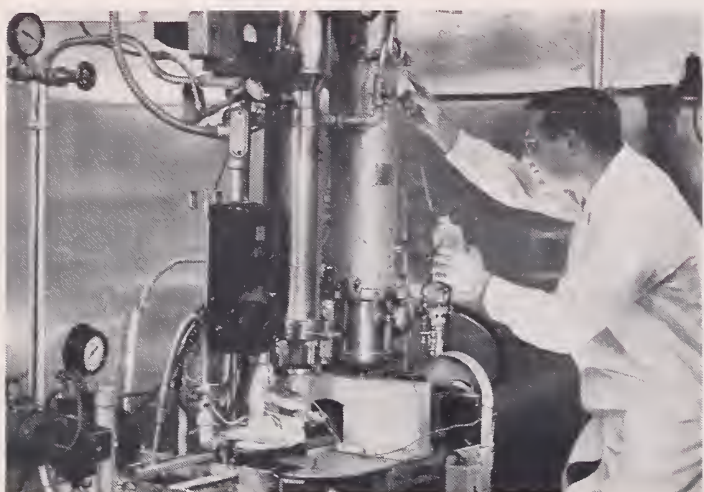
These pictures are devoted to the work of the Wyndmoor laboratories of the Eastern Division. Research on meat, dairy products, and allergens is done in other laboratories of the Division in Washington, D. C., and Beltsville, Md.



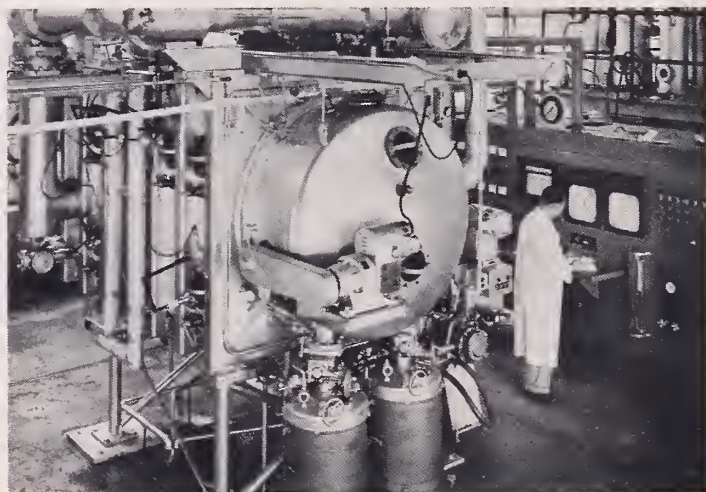
BN-7018X-Oven used in experimental batch drying of whole milk in the form of a foam to make a product that dissolves instantly in cold water and retains the full flavor of fresh milk.



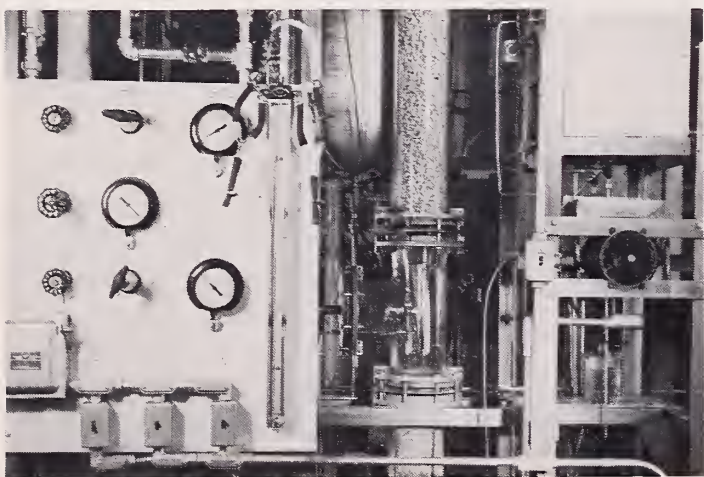
BN-7019-X-Pilot-plant production of potato flakes, a new form of dehydrated mashed potatoes now being made commercially.



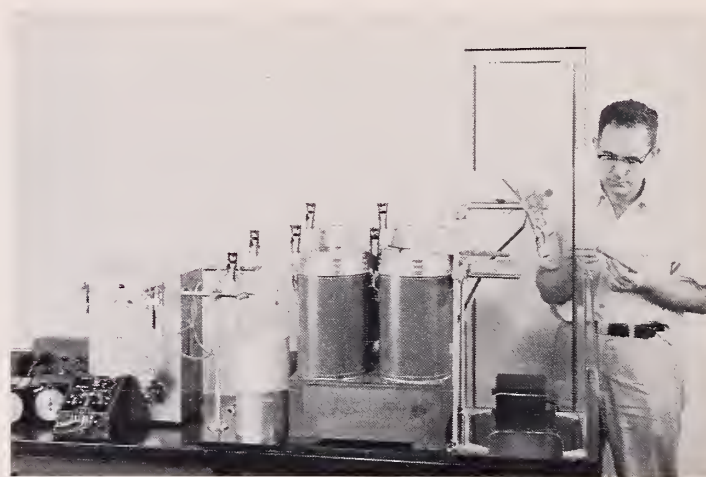
N-19594-Laboratory equipment for making juice powders by a continuous process from apples, grapes, cherries, strawberries, and other non-citrus fruits.



BN-7020-X-Commercially feasible method of making dry whole milk is a long step from oven drying. This vacuum dehydrator is being used to scale up the process and make it continuous in operation.



N-19587-Recovery of flavor from fruit juices in the form of highly concentrated essences.



BN-7021-X-This machine smokes cigars just as humans do. Two cigars at a time are placed in holders, lit, and puffed on in a controlled way. Smoke is collected in chilled coils inside the four tanks and then analyzed for its constituents.



BN-7022-X- These agave leaves may contain substances needed to make cortisone. Wild plants are shipped to the Eastern Division from all over the world for extraction and analysis for drug precursors.



BN-7023-X-Miniature washers give accurate information on the value of synthetic detergents from animal fats.



BN-7024-X-Analysis of canaigre extracts. Canaigre is a wild plant now being cultivated to provide a domestic substitute for our vital imported tannins in the event of an emergency.



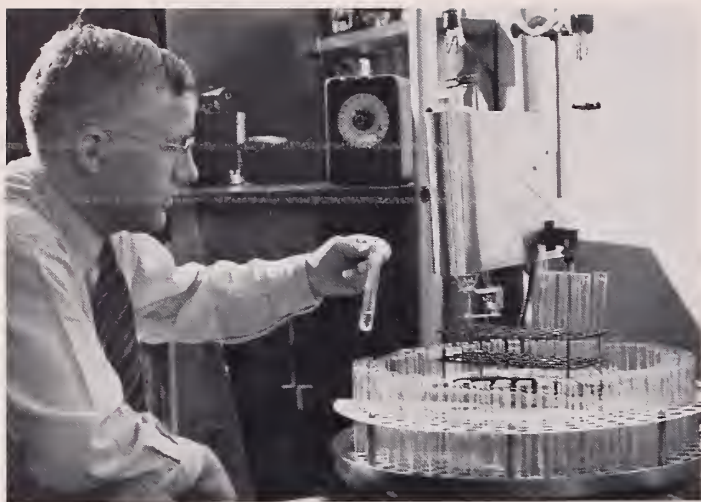
BN-7025-X- Sterile sap is collected from maple trees on the grounds of the Wyndmoor laboratories of the Eastern Division for use in an extensive research program that is converting the art of maple sugaring to an exact science.



BN-7026-X- Dairy wastes from a milk-bottling plant being treated by the Eastern Division's aeration process. Proteins and sugars in the waste are consumed by bacteria, and the clear, harmless fluid discharged to a stream.



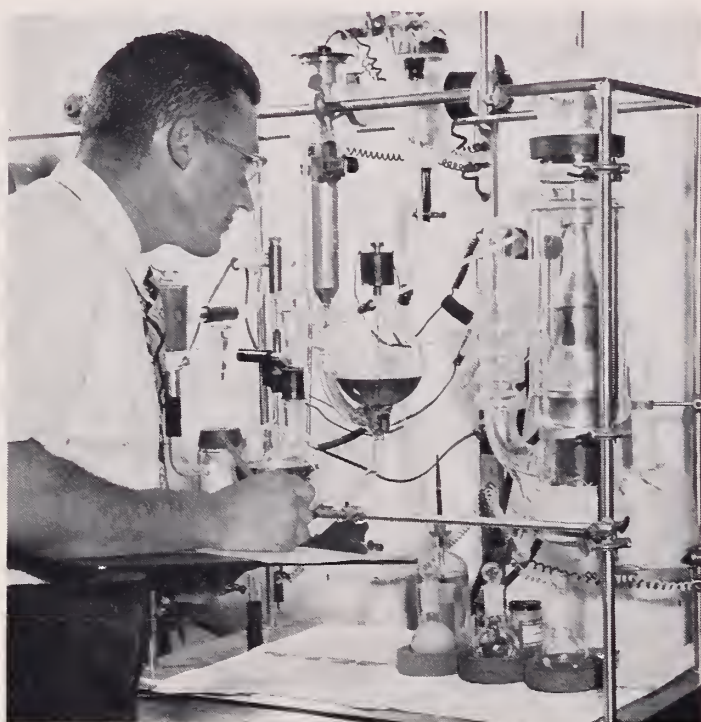
BN-7027-X- An experimental tannage of light leather using dialdehyde starch, a new tanning agent made from corn.



BN-7028-X-Collection of fractions from the chromatographic analysis of hide proteins.



BN-7029-X-Plasticizers made from animal fats by processes developed at the Eastern Division protect a host of widely used consumer items against deterioration by heat and light.



N-19642-Molecular still used to purify derivatives of animal fats.



BN-7030-X-A quick enzyme treatment, now under development for hides, loosens the hair so it can be easily removed before tanning, as this test with a hand scraper shows.

Magazines and newspapers may obtain glossy prints of any of these photographs from the Photography Division, Office of Information, U. S. Department of Agriculture, Washington 25, D. C. Others may purchase prints, at \$1.00 each, from the same address.